

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Britax Child Safety, Inc.

South Carolina Manufacturing Extension Partnership

Lean Implementation Success at Britax Child Safety, Inc.

Client Profile:

Britax Child Safety, Inc., is a world leader in the design and manufacture of child restraint products such as car seats and strollers. Headquartered in the United Kingdom, the company set up its first U.S. manufacturing facility in Charlotte, North Carolina in 1997. The U.S. facility sells its products through major retailers such as Babies R Us, Target and other specialty and independent retailers. Britax employs 120 people.

Situation:

Britax introduced Lean to its workforce through a Principles of Lean Manufacturing workshop presented by the South Carolina Manufacturing Extension Partnership (SCMEP), a NIST MEP network affiliate. John Czerwinski, Britax's Continuous Improvement Manager serves on SCMEP's Metrolina Lean Alliance steering committee, and he saw more opportunities and contacted the SCMEP for assistance in reorganizing the product assembly areas into single piece flow rather than the standard batch production.

Solution:

SCMEP provided training in Value Stream Mapping and Single Piece Flow. Together they re-landscaped the assembly areas into u-shaped single piece flow cells. The change reduced the work in process (WIP), and by implementing 5S strategies complete with weekly audits, the work areas became neat, clean, and organized. Quick Changeover assembly fixtures and tools were implemented to allow flexibility in scheduling production lines. Overall, the company has been able to increase the number of car seats produced per man-hour of work performed with the addition of no new employees and saved a total of 2,000 square feet of space. The pilot Companion line resulted in 15 percent space savings and 15 percent greater production since single piece flow inception. Other product lines that were moved to single piece flow experienced similar positive impact results. The Roundabout line of convertible car seats saw a reduction of 24 percent in space used and improved output by 17 percent; the Parkway line of booster car seats experienced a 15 percent space reduction and an increase of six percent in output. Similar Lean improvements were then conducted in the warehouse. Magnetic labels, which can be produced quickly on a daily basis as inventory turns demand, have made the racks much more organized. Now all raw materials fit neatly into labeled racks and do not block aisles as before. Unlike many other manufacturing facilities, Czerwinski's continuous improvement work is not limited to the shop floor. Working with suppliers on a Supplier Scorecard that helps them deliver targeted cost reductions, he has helped reduce lead times and encouraged Lean changes within their facilities, such as reducing defects and delivering right-sized boxes and pallets for efficient Britax warehouse storage. In addition, Czerwinski hired two new employees, a Continuous Improvement Analyst who reviews "dead" inventory and has been able to eliminate 80 percent of that unused inventory in seven short months, and a Utility Technician whose sole purpose is to support 5S improvements by fabricating whatever is needed, such as customized material delivery chutes to

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improve single piece flow efforts.

Results:

- * Realized \$900,000 in cost savings.
- * Achieved cost avoidance of \$20,000.
- * Invested \$50,000 in training and workforce development.
- * Created 2 jobs.

Testimonial:

"In addition to Lean training and assistance, we like what SCMEP is doing with the Lean Alliances in the area, designed to bring together manufacturers to share Lean best practices on a regular basis."

John Czerwinski, Continuous Improvement Manager